

Figure 1a: Simulated lattice image of a  $90^\circ$  partial dislocation in silicon [110] that is part of a simulated focus series.

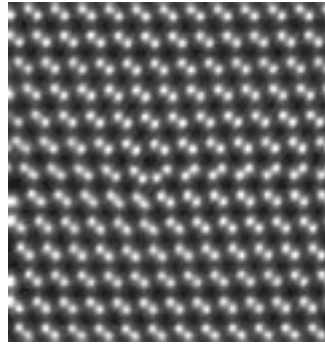


Figure 1b: Reconstructed exit wave from simulated focus series. Phase image. Model: Single periodic reconstruction of the dislocation core.

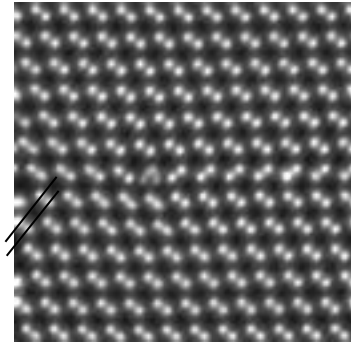


Figure 1c: Reconstructed exit wave from simulated focus series. Phase image. Model: Double periodic reconstruction of the dislocation core.

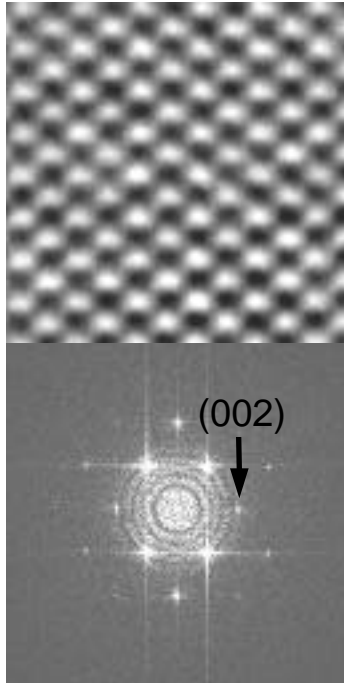
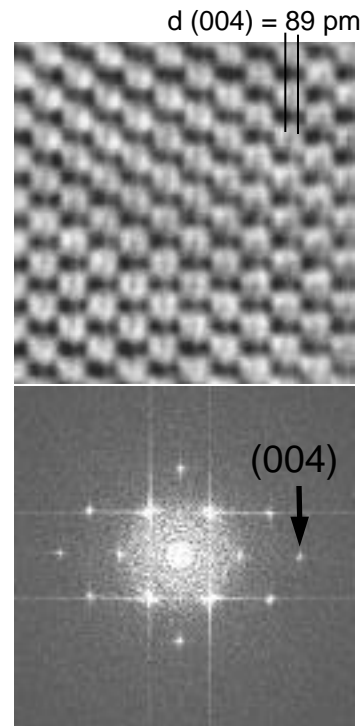


Figure 2:  
Experimental images of diamond [110] that are part of focus series and their Fourier transform.

Left:  
Underfocus: -108 nm

Right:  
Underfocus: -207 nm



$d(004) = 89 \text{ pm}$

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Figure 3:  
Experimental reconstruction of the electron exit wave of diamond [110]. The depicted phase image was reconstructed from 15 lattice images that were recorded around underfocus values of -200 nm. The white dots mark atomic positions.

